DOCUMENT RESUME

ED 272 558 TM 860 474

AUTHOR Natriello, Gary
TITLE Products and Processes of the National Center for Education Statistics: An Agenda for the Next Decade.
SPONS AGENCY National Center for Education Statistics (ED), Washington, DC.
PUB DATE Jun 85
NOTE 15p.; In: Invited Papers: Elementary/Secondary Education Data Redesign Project, October 1985; see TM 860 450.
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Data Collection; Educational Resources; Elementary Secondary Education; *Longitudinal Studies; *National Surveys; Occupational Tests; Preschool Education; Private Schools; Public Schools; *Research Design; *Research Needs; School Surveys; State Surveys; Technological Advancement
IDENTIFIERS High School and Beyond (NCES); National Center for Education Statistics

ABSTRACT

This review of the current data collection activities of the National Center for Education Statistics (NCES) is divided into two parts: a section of major recommendations applying to NCES plans in general, and a section reviewing each data collection activity and presenting specific suggestions. Section I recommends that NCES should: (1) explicitly consider moving beyond the collection of data on schooling to the collection of data on education; (2) conduct a longitudinal study of students in the elementary, middle-school, and junior high school grades; (3) pay greater attention to the collection of data on school processes; (4) organize the systematic collection of data on student performance on employer sponsored tests; (5) devote greater attention to those educational organizations that serve preschool youngsters; (6) put in place a process for ensuring that its large-scale data collection efforts can be linked with more micro-level studies; (7) work with a few states to develop pilot state level data bases related to significant issues; and (8) maintain an awareness of emerging technologies for the transmission and communication of data to relevant groups of users. Section II comments on the six current NCES surveys: Private School Survey, Public School Survey, Recent Survey of College Graduates, Survey of Teacher Demand and Shortage, High School and Beyond, and Library and Media Center Survey. (LMO)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED272558

Products and Processes of the National Center for Education Statistics: An Agenda for the Next Decade

Gary Natriello
Teachers College, Columbia University

June 1985

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

S. Mandamus

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

TM 820 474

Products and Processes of the National Center for Education Statistics:
An Agenda for the Next Decade

Introduction

This review of the current data collection activities of the National Center for Education Statistics is divided into two major sections. The first section presents a set of eight major recommendations that apply to NCES plans in general. Although these general recommendations carry some implications for specific data collection activities, the emphasis is on the general needs for coverage in new content areas and the development of new processes to involve and serve users of NCES data. The second section of the paper reviews each NCES data collection activity and presents very specific suggestions. In some cases, the general arguments identified in the first section are illustrated by specific suggestions in the second section.

Section I: General Recommendations

The general recommendations for future NCES data collection activities are of two types. The first five recommendations deal with the content of current and new data collection activities. These recommendations typically concern educational phenomena that are likely to become increasingly important to educational policy makers in the years ahead. Other recommendations deal with the processes by which education statistics are collected. Such processes have an impact on both the quality of the data that is collected and on the utility of that data to potential users. These process recommendations imply a greater leadership role for NCES in organizing education data collection activities nationwide. They suggest not only a variety of ways in which NCES itself can collect data on educational processes, but also ways in which NCES can guide and coordinate the data gathering activities of others so that they can be employed in analyses of educational activities on a nationwide scale.

Recommendation 1: NCES Should Explicitly Consider Moving Beyond the Collection of Data on Schooling to the Collection of Data on Education

Most current NCES data collection activities focus on elementary and secondary schools. While schooling should remain at the core of NCES data collection plans, greater attention should be devoted to educational activities that extend beyond formal schools. Such greater attention is necessary for two reasons. First, non-school educational experiences are playing an important role in the lives of young Americans (Cremin, 1976; Leichter, 1975). Students are being exposed to a greater variety of educational phenomena than ever before from the mass media (Gans, 1967; Liebert, Neale, and Davidson, 1973; Lesser, 1974) to educational software and other new information technologies (Smith, 1982), to supplementary instruction in the growing number of propriety schools and tutoring services (Martin and McCartney, 1976). While we may not yet be in the age of Illich's (1971) learning networks, students are being exposed to a growing number of learning resources outside of the traditional schools. While the public schools are available to all and while we have spent considerable time and effort to attempt to secure equal educational

opportunity, we know very little about the distribution of non-school educational resources.

A second reason for paying attention to the growing set of educational resources outside of traditional schools is to improve our understanding of the effects of schools themselves. If students and their parents are coming to rely increasingly upon non-school educational activities for the development of important skills and abilities, it will be impossible to understand the true effects of schools, public or private, without good information on the other educational resources available to students. Moreover, if more economically able parents secure these outside educational resources at higher rates there is a danger of attributing to ascriptive characteristics, effects that should be attributed to organized educational activities outside of public and private schools. Non-school educational activities may become important control variables, much like parent educational levels and economic resources, in understanding the effects of schooling.

Unlike public and private full-time day schools, non-school educational resources may be difficult to identify. Several strategies may be necessary to develop data on these educational activities. First, it would be useful to include items on regular NCES surveys of students and parents (e.g., High School and Beyond) which request respondents to report on the extent of their participation in non-school educational activities. A preliminary list of such activities would include: private lessons in music and/or art, private instruction in sports and other physical activities (e.g., tennis, horseback riding), participation in a computer users group, training related to a part-time job, attendance at an SAT or ACT test preparation course, remedial or supplementary instruction in one or more school courses, and training provided by a youth or community group such as the YMCA or the Boy Scouts or Girl Scouts. This strategy would permit analyses to determine the extent to which individual students participate in non-school educational activities and the impact of such participation on student performance in school classes and on standardized tests. Analyses could also be conducted to determine the access to such supplementary educational resources of students with different family and background characteristics.

A second strategy for collecting information on non-school educational activities would be to identify the population of educational service providers through state corporate records. Many supplementary educational activities are provided by private businesses, yet the education community and education policymakers have little current information on what may be the fastest growing part of the educational sector. A census of such organizations would begin to fill this gap in our knowledge.

A third strategy for collecting information on the extent of nonschool educational activities would be to identify a representative sample of communities and survey the available non-school educational programs available in the community. This strategy would permit analyses to determine the distribution of supplementary educational activities across communities with different demographic and economic characteristics.

The point of all of these data collection activities would be to begin to understand the extent to which non-school educational activities

contribute to the development of elementary and secondary students in the United States. Educational policymakers will need to appreciate the potential and the pitfalls of such educational activities in developing a coherent approach to educational policy. The ready availability of such non-school educational options may suggest new policy initiatives. For example, recent plans to institute a tax credit or voucher system to enhance parental choice may be modified to permit parents who select a traditional public school for their children to use the credit to support supplementary educational activities. The ability to select individual activities as opposed to total school programs may give parents even greater choice and may further stimulate the growth of an educational services sector to meet rapidly changing educational needs.

Recommendation 2: NCES Should Conduct a Longitudinal Study of Students in the Elementary, Middle-School, and Junior High School Grades

The High School and Beyond data set has proven to be a valuable resource for investigators interested in understanding the progress of students from the high school to the work place. Longitudinal studies of the same sort are needed for younger children. Such studies are important for two reasons. First, since a number of problems associated with high school students (e.g., teenage pregnancy, dropping out, drug usuage) are now seen to have their roots in the years prior to high school (Furstenberg, 1976; Stroup and Robbins, 1972; Berg, 1980; Lipsitz, 1985), it is important to understand the processes operating earlier in the school career of students if we truly want to understand the problems of the high school years.

Second, there are a number of important issues that pertain directly to students in elementary, middle, and junior high schools. These include: the impact of the family on the early schooling experiences of children (Richardson, Galambos, Schulenberg, and Petersen, 1984), the impact of the various school-to-school transitions on young students (Simmons, Blyth, Van Cleave, and Bush, 1979), the effects of classroom organizational characteristics (Rosenholtz and Rosenholtz, 1981; Rosenholtz and Simpson, 1984), and the effects of the instructional and evaluative strategies adopted by teachers (Entwisle and Hayduk, 1981).

Mounting a longitudinal study of students from kindergarten through high school, while desirable, would be an expensive and difficult undertaking. If resource constraints make such a comprehensive effort impossible, a longitudinal study of junior high school students which follows them through the transition to the high school should receive top priority. Data from such a study could be put to good use in conjunction with the results of the High School and Beyond Study. A second study might be planned to follow students from the upper elementary or middle school grades into the junior high school. In both studies particular attention should be directed to the transition between educational organizations.

Recommendation 3: NCES Should Pay Greater Attention to the Collection of Data on School Processes

Notably absent from the High School and Beyond Study are data on school processes, the experiences of students and teachers inside of schools. While the study has good items on student background and

experiences prior to high school, on student experiences outside of high school (e.g. TV viewing), and on student expectations for education and occupational attainment after high school (e.g., plans for post-secondary education), it contains virtually nothing about the processes that students currently experience in the school. The absence of these indicators severely limits the use to which educational researchers can put such a data set.

Social scientists (Sorensen and Hallinan, 1977; Barr and Dreeben, 1983) have recently directed attention to school processes, renewing an interest that characterized studies of schooling of the fifties and early sixties (Gordon, 1957; Coleman, 1961; McDill, 1969; McDill and Rigsby, 1973). Educators have placed additional emphasis on what schools can do to make a difference in the lives of students (Walberg, 1984). Yet, the High School and Beyond Study seems to treat the school itself like a black box into which student characteristics are poured and out of which student expectations and occupational experiences flow.

An effort should be made to identify key school processes and include indicators of such processes in future studies of schooling. Such processes might include: performance evaluation (Entwisle and Hayduk, 1981; Rosenholtz and Simpson, 1984; Natriello, 1982; Natriello, 1984; Natriello and Dornbusch, 1984), rules and procedures (McPartland and McDill, 1977; Gottfredson and Daiger, 1979), peer networks (Coleman, 1961; Hallinan and Tuma, 1978; Epstein and Karweit, 1983), group processes (Sharan, 1980; Sharan, Hare, Webb, and Hertz-Lazarowitz, 1980; Slavin, 1980), instructional strategy (Good, Ebmeier and Beckerman, 1978; Good, 1983), time on academic tasks (Karweit, 1983; Karweit, 1984), and standards for performance (Natriello and Dornbusch, 1984; Natriello and McDill, forthcoming). Recent surveys such as the National Institute of Education's Safe School Study (National Institute of Education, 1977) and Goodlad's A Study of Schooling (1983) might be used as initial sources for items relating to school processes.

Recommendation 4: NCES Should Organize the Systematic Collection of Data on Student Performance on Employer Sponsored Tests.

One ultimate outcome of schooling processes is student performance in the work place. From time to time there have been various reports of how recent graduates have fared on the performance tests administered by major employers. At times employers have pointed to the lack of student proficiency in basic communication and computation skills. Such charges are often said to be based on student performance on standardized tests used by major employers to screen potential employees. Closer analyses of the reactions of major employers to recent graduates (Levine, 1984) have suggested that the major deficiency of employees lies not in the area of basic skills but in the area of attitudes toward work and deportment.

In any case, employers are increasingly involved in collecting data on the performance of recent high school graduates (Committee on Ability Testing, 1982, chapter 4). NCES might capitalize on this trend by organizing and aggregating this data on the performance of recent graduates from a representative sample of major employers. Major sources of such data include the armed forces (The Armed Services Vocational Aptitude Battery - ASVAB - is the most used employment test.), the civil service,

state and local governments, private sector employers, and various professional associations. Thus, performance data on recent graduates is being collected by a large number of employers across the nation. What remains to be done is the assembling of a carefully drawn sample of such information and systematic tracking and interpreting of the results of such tests over time. NCES might organize such an effort.

Recommendation 5: NCES Should Devote Greater Attention to those Educational Organizations that Serve Pre-school Youngsters.

While NCES currently collects data on the universe of public elementary and secondary schools with sample studies of private schools, it devotes relatively little attention to institutions serving the pre-school youngster. A notable exception is the survey of pre-primary enrollments using census data. Efforts should be made to work with appropriate agencies in the various states to collect data on the population of child care and early education institutions serving youngsters from birth to kindergarten. We have relatively little systematic national information on this rapidly growing sector of educational institutions. Such data would appear to be important for two reasons. First, in recent years there has been increased concern about the basic physical safety of children in such institutions. This has given rise to a more general concern for the overall quality of these programs. Second, we have a great educational opportunity that may be missed if such institutions are not identified and encouraged to promote the educational growth of young children. States should be encouraged to monitor such institutions and develop appropriate policies to insure that their educational potential is realized. As more and more women enter the work force full time, the role of such institutions in the U.S. is likely to become more important.

Recommendation 6: NCES Should Put in Place a Process for Ensuring that Its Large-Scale Data Collection Efforts Can be Linked with More Micro-level Studies

In the foreseeable future it is likely that only the federal government will be able to mount educational research projects involving the collection of large nationally representative data sets. Yet many new and interesting theoretical ideas and most richly textured studies of educational phenomena are developed by individual investigators or small teams of investigators working in a small number of schools with severely limited research budgets. If the large-scale data collection efforts of NCES are to profit from and enrich the work of most educational researchers, NCES will have to put in place a process to ensure that linkages can be made between its macro-level data collection program and micro-level investigations.

While a variety of strategies can be employed to establish and maintain this link, the following would seem to be the minimum required:

1) Develop clear and widely announced procedures for submitting items for NCES surveys.

2) In considering items for inclusion in NCES data collection efforts, those items which have been used successfully in small scale studies should be given priority over those

items which have not been proven in small scale studies.

3) NCES should convene a panel to develop a set of critical indicators of each level of schooling that might be used to describe school sites employed in small scale studies so that the educational research community can develop a clearer sense of the nature of the sites in which small scale studies are conducted.

4) NCES should work closely with the appropriate National Institute of Education Research and Development Centers and Regional Educational Laboratories to coordinate nationwide surveys with the on-going work of these major government sponsored, educational research institutions.

Recommendation 7: NCES Should Work with A Few States to Develop Pilot State Level Data Bases Related to Significant Educational Issues

It is becomming increasingly clear that the state is the level at which much educational policy-making takes place and will continue to take place in the future. With this in mind NCES should take a leadership role in developing model state level data bases in areas of significant educational concern. For example, the current interest in the calibre of the teaching corps is a crucial issue in education, and one that is not likely to go away. NCES has responded by developing a survey of teacher demand and shortage using a nationally representative sample of LEA's and private schools. While NCES should be commended for responding to increasing concern about the teaching force, the chief policy options to improve the teaching force are at the state level (United States Department of Education, 1984). Therefore, it would be far more appropriate for NCES to work with a few individual states to assist them in developing state level data bases relevant to this issue.

A two stage process should be initiated. In the first stage NCES would identify several states interested in developing a state level data base relevant to state policy making. NCES would then work with these SEA's to develop the data gathering procedures. In the second stage NCES might select the most successful data base design and use it as the model for a national data base assembled from data collected by individual states. Other SEA's would be asked to develop the designated state level data bases.

There are several advantages to such an approach. First, state level data bases would insure that the data gathered is at the appropriate level of aggregation for policy making. Second, NCES could provide a leadership role in helping state departments of education to develop the capacity for collecting and interpreting educational data. Third, NCES could develop national data sets, with some assurance that the actual data collection was useful to the data collectors (SEA's) and that the data collection was done properly.

Recommendation 8: NCES Should Maintain an Awareness of Emerging Technologies for the Transmission and Communication of Data to Relevant Groups of Users.

While the program of publications and computer data tapes now used by NCES has met the needs of many data users, NCES should maintain an awareness of new technologies for data transmission and communication with relevant users of its products. Although it is impossible to anticipate future developments in this area, several currently available technologies might offer increased access and ease of use for NCES data. These include:

1) Establishment of an on-line query-based information system to access NCES data. Such a system could be developed independently or in conjunction with a general information utility such as The Source or Compuserve. There is already evidence of the growing use of such information services by educational researchers and the general public (Pierce and Cooley, 1985).

2) The production of NCES data in new forms such as floppy disks for use on microcomputers. Microcomputers are moving quickly into universities, SEAs and LEAs, and educational policy agencies. NCES might increase the utility of much of its data to a wide variety of users by making it available in micro-readable formats.

3) NCES should develop a comprehensive program to make the research community more aware of its activities in the collection and processing of education data. The program of dissemination activities and curriculum materials developed for the 1980 Census provides some good examples of techniques that could be used by NCES.

Section II: Specific NCES Activities

The comments in this section regard specific NCES data collection activities. All of these comments, both those pertaining to existing items on NCES surveys and those recommended new items, are based on the package of NCES materials provided for this review. They do not reflect any other NCES activities.

I. Common Core of Data (CCD)

The Common Core of Data seems adequate to provide basic information on the universe of public schools and school districts in the United States. I have only three suggestions in this area.

First, the Local Education Agency Nonfiscal Report currently requests a report on only those programs that are part of the regular school system and that are financed by the local education agency or other public education unit. In order to understand the extent to which the public schools are involved (even without providing financial support) with a variety of new educational services such as day-care for young children or extended day programs for latch-key children, it would be important to request information on programs affiliated with each public school, even those which simply use the physical facilities of the public schools.

Second, respondents are allowed to designate the beginning of the range of the educational program as pre-kindergarten or kindergarten. It would provide more useful data on educational programs for very young children to have designations related to the age of the child.

Third, the current procedure for calculating student membership assumes that names of students on the rolls are automatically dropped after a specified number of days of consecutive absence. Yet there is no standard specification of the number of days after which students should be dropped. As a result, different district level practices may result in quite different reported enrollment levels. NCES should adopt a standard for retaining students on the rolls.

II. Sample Surveys

The comments on the NCES program of sample surveys pertain, for the most part, to specific survey items. These comments are organized in terms of the six current surveys conducted by NCES.

Private School Survey

The following items on the private school survey seem worthy of additional attention:

a) On page 6, question 14, respondents might be asked to note the amount of funds available for financial aid during the current academic year.

b) On page 7, question 15, respondents might be asked to report on programs offered primarily to extend the school day and used by working parents for child care purposes.

c) On page 10, question 19, respondents might be asked whether this school restricts admission on the basis of membership in a religious, cultural, or language group. If the answer is yes, they might be asked to note the nature of the restriction.

d) On page 10, respondents might be asked to report the percentage of initial applicants to this school that are finally admitted.

e) Respondents should be asked to report the name of the public school or schools to which students in this school would normally be assigned. This information can then be further identified with the NCES school code. This item might be included in a future survey of parents.

Public School Survey

Administrator Survey

a) It would be useful to include a set of items on this survey that parallel those on the private school survey. For example, the questions on incentive systems could be included in both surveys.

b) Question 23 on page 4 should be deleted. It asks for the

administrator's opinion regarding curriculum requirements when no information on current requirements is requested.

Teacher Survey

a) In general this survey solicits information about school-related activities (e.g., question 17, page 5) but never inquires about instructional activities. We have no idea what kind of instruction is going on in classrooms. Unfortunately, this continues an NCES pattern of ignoring instructional processes in classrooms.

b) Questions 36 solicits the teacher's opinion on the number of years of study that should be required without determining current school requirements.

Recent Survey of College Graduates

a) If not already done, information on the college attended (e.g., tuition rate, etc.) should be collected and matched with student responses.

b) Information on the teacher certification requirements of the state in which these students are certified should be collected and matched with student reports. This would make it possible to examine the impact of new state certification policies.

Survey of Teacher Demand and Shortage

a) As noted earlier, this information would be more appropriately collected on the state level. Any national representative sample should also be representative for each state so that SEAs can use the results for planning purposes.

High School and Beyond

Sophomore First Follow-Up

a) More detailed questions regarding curriculum choice might be added as a follow-up to question 4 on page 3. Students should be asked to report why they decided to take a course or not to take a course. See Garet and DeLany (1985).

b) Questions should be asked about experiences in particular classrooms. See Goodlad (1983) and Natriello and Dornbusch (1984) for examples.

c) Questions 90, 91, and 92 should be deleted. The information on anticipated expenses will be of doubtful value.

d) Question 128might contain a response category for special college funds established by parents.

Senior Year First Follow-Up

a) On question 11 on page 10, response categories should permit

a distinction between getting fired and other reasons for leaving a job.

b) On question 37 on page 22, the distinction between course credits and semester or quarter credits is unclear.

In General

a) An attempt should be made to develop a broader range of outcome tests. The currents tests represent a narrow range of academic skills.

b) Questions should be added pertaining to outside supplementary instruction while in high school (e.g. SAT tutoring, music lessons, use of SAT prep software, vocational training etc.).

Library and Media Center Survey

a) A question should be added to request the costs for the maintenance of computers on page 4.

b) Questions should be added to determine the patterns of current use and future needs for various types of data bases.

III. Other Agency Data

Preprimary Enrollments of Children 3-5 years old

a) This is a good effort to develop data on this important group. Additional efforts would be useful, perhaps dealing with educational options for even younger children.

References

Barr, R. and R. Dreeben. How Schools Work. Chicago: University of Chicago Press, 1983.

Berg, I. School Refusal in Early Adolescence. Pp. 231-249 in L. Hersov and I. Berg (eds.) Out of School: Modern Perspectives in Truancy and School Refusal. New York: Wiley, 1980.

Coleman, J. The Adolescent Society. New York: Free Press, 1961.

Committee on Ability Testing, Assembly of Behavioral and Social Sciences, National Research Council. Ability Testing: Uses, Consequences, and Controversies. Part 1: Report of the Committee. Washington, D.C.: National Academy Press, 1982.

Cremin, Lawrence A. Public Education. New York: Basic, 1976.

Entwisle, Doris R. and Leslie Alec Hayduk. Academic Expectations and the School Attainment of Young Children. Sociology of Education, 54, 1981:34-50.

Epstein, J.L. and N. Karweit (eds.). Friends in School: Patterns of Selection and Influence in Secondary Schools. New York: Academic Press, 1983.

Furstenberg, F. Jr. Unplanned Parenthood: The Social Consequences of Teenage Childbearing. New York: Free Press, 1976.

Gans, Herbert J. "The Mass Media as an Educational Institution," Television Quarterly, 6, Spring 1967:2037.

Garet, Michael S. and Brian DeLany. Decisions and Random Draws: Course Choice in Math and Science. Stanford, California: School of Education, Stanford University, 1985.

Good, T. Research on Classroom Teaching. In L.S. Shulman and G. Sykes (eds.), Handbook of Teaching and Policy. New York: Longman, 1983: 42-82.

Good, T., H. Edmeier, and T. Beckerman. Teaching Mathematics in High and Low SES Classrooms: An Empirical Comparison. Journal of Teacher Education, 29, 1978:58-90

Goodlad, J. A Place Called School: Prospects for the Future. New York: McGraw-Hill, 1983.

Gordon, C. Wayne. The Social System of the High School. Glencoe, Illinois: The Free Press, 1957.

Gottfredson, G. and D. Daiger. Disruption in Six Hundred Schools. Report No. 289. Baltimore, Maryland: Center for the Social Organization of Schools, The Johns Hopkins University, 1979.

Hallinan, M.T. and N.B. Tuma. Classroom Effects on Change in Children's Friendships. Sociology of Education, 51, 1978:170-282.

Illich, Ivan. Deschooling Society. New York: Harper and Row, 1971.

Karweit, N. Time-on-Task: A Research Review. Report No. 332. Baltimore, MD: Center for the Social Organization of Schools, Johns Hopkins University, 1983.

Karweit, N. Time-on-task reconsidered: a synthesis of research on time and learning. Educational Leadership, 41, 1984:33-35.

Leichter, Hope Jensen, (ed.). The Family as Educator. New York: Teachers College Press, 1975.

Lesser, Gerald S. Children and Television: Lessons from Sesame Street. New York: Random House, 1974.

Levine, Marsha. Summary of Report: Survey of Employer Needs. Washington, D.C.: Committee for Economic Development, 1984.

Liebert, Robert M., John M. Neale, and Emily S. Davidson. The Early Window: Effects of Television on Children and Youth. New York: Pergamon Press, 1973.

Lipsitz, Joan. A Statistical Portrait of American Adolescents. Common Focus: An Exchange of Information About Early Adolescence, 6, 1985:1-5.

Martin, R. and R.J. McCartney. Education's Big Boom is Ending, but Studies to Get More Diverse. Wall Street Journal, April 8, 1976.

McDill, E.L. and L.C. Rigsby. Structure and Process in Secondary Schools: The Impact of Educational Climates. Baltimore, The Johns Hopkins University Press, 1973.

McDill, E.L., L.C. Rigsby, and E.D. Meyers, Jr. Educational climates of high schools: their effects and sources. American Journal of Sociology, 74, 1969:567-586.

McPartland, J. and E.L. McDill, (eds.), Violence in Schools. Lexington, Mass.: D.C. Heath and Company, 1977.

National Institute of Education. Violent Schools-Safe Schools: The Safe School Study Report to the Congress. Washington, D.C.: U.S. Government Printing Office, 1978.

Natriello, G. Organizational Evaluation Processes and Student Disengagement in Secondary Schools. St. Louis: Final Report to the National Institute of Education, 1982.

Natriello, G. Problems in the Evaluation of Students and Student Disengagement from Secondary Schools. Journal of Research and Development in Education, 17, 1984:14-24.

Natriello, G. and S.M. Dornbusch. Teacher Evaluative Standards and Student Effort. New York: Longman, 1984.

Natriello, G. and E.L. McDill. Performance Standards, Student Effort on Homework and Academic Achievement. Sociology of Education, forthcoming.

Pierce, Jean and William W. Cooley. A Communications Network for Educational Researchers. Educational Researcher, 14, 1985:14-17.

Richardson, Rhonda A., Nancy L. Galambos, John E. Schulenberg, and Anne C. Petersen. Young Adolescents' Perceptions of the Family Environment. Journal of Early Adolescence, 4, 1984:131-153.

Rosenholtz, S.J. and S.H. Rosenholtz. Classroom Organization and the Perception of Ability. Sociology of Education, 54, 1981:132-140.

Rosenholtz, S.J. and C. Simpson. The Formation of Ability: Developmental Trend or Social Construction? Review of Educational Research, 54, 1984:31-64.

Simmons, Roberta G., Dale A. Blyth, Edward F. Van Cleave and Diane Mitsch Bush. Entry into Early Adolescence: The Impact of School Structure, Puberty, and Early Dating on Self-Esteem. American Sociological Review, 44, 1979:948-967.

Sharon, S. Cooperative Learning in Small Groups: Recent Methods and Effects on Achievement, Attitudes, and Ethnic Relations. Review of Educational Research, 50, 1980:241-271.

Sharon, S., P. Hare, C.D. Webb, and R. Hertz-Lazarowitz, (eds.), Cooperation in Education. Provo, Utah: Brigham Young University Press, 1980.

Slavin, R. E. Cooperative Learning. Review of Educational Research, 50, 1980:315-342.

Smith, Anthony. Information Technology and the Myth of Abundance. Daedalus, 3, 1982:1-16.

Sorensen, A.B. and M.T. Hallinan. A reconceptualization of school effects. Sociology of Education, 50, 1977:273-289.

Stroup, A.L. and L.N. Robins. Research Notes: Elementary School Predictors of High School Dropout Among Black Males. Sociology of Education, 45, 1972:212-222.

United States Department of Education. The Nation Responds: Recent Efforts to Improve Education. Washington, D.C.: U.S. Government Printing Office, 1984.

Walberg, Herbert J. Improving the Productivity of America's Schools. Educational Leadership, May 1984:19-27.